

## **Express Mail No.: EL 500 576 834 US**

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Chung et al.

10/069 586

Application No.: 40/070,350

Filed: February 27, 2002

For:

OSTEONECTIN BASED TOXIC

GENE THERAPY FOR THE TREATMENT OF CALCIFIED **TUMORS AND TISSUES** 

Confirmation No.: 9987

Group Art Unit: To be assigned

Examiner: To be assigned

Attorney Docket No.: 9426-023

## TRANSMITTAL OF SEQUENCE LISTING UNDER 37 C.F.R. § 1.821

**Assistant Commissioner for Patents** Washington, DC 20231

Sir:

In accordance with 37 C.F.R. § 1.821, and in response to Notice to File Missing Requirements, Applicants submit herewith a Sequence Listing in paper and computer readable form pursuant to 37 C.F.R. §§ 1.821(c) and (e).

I hereby state that the content of the paper and computer readable copies of the Sequence Listing, submitted herewith are the same. I hereby state that the submission herein under 37 C.F. R. § 1.821(g) does not include new matter.

Respectfully submitted,

Dated: November 14, 2002\_

PENNIE & EDMONDS LLP

1155 Avenue of the Americas New York, New York 10036-2711

(212) 790-9090



## SEQUENCE LISTING

Will's Chung, Leland Esieh, Chia-Ling Ksememan, Kenneth S. Yeung, Fan <121> OSTEOMEGTIM BASED TOWIO GENE THERAPY FOR THE TREATMENT OF GALCIFIED TIMURS AND TISSUES <130% 9426-023-999 <140> 10/070,380 <141> 2001-02-27 <180> US 60/136,440 <151> 1999-05-28 <1.60> 1.2 <170> FastSEQ for Windows Version 4.0 0210> 1 0211> 2313 0212> DNA .213> Homo sapiens 2400> 1 gaattoottg tactttttt cocttotoag tiotgoactt aactogtota aaaaaattaa 50 1..0 aaaagaatti aagaaaccac aaagctaago tgggtgeggt ggetcaegee tgtaateeta geactitigg aageraagge attoggatty codaagetea ggagttegag accageetig 1:0 240 gcaacatgtt gaaaccccat ttotactaaa aatacaataa attagctggg tgttgtggca tgtgogootg taatoobago tabtotggag gotgaggogo gataattgot rgaabboggg 300 aggoagaggt tgpagtgago bgaaatbata bbabtgbabt bbagbbtggg bgabagagtg 360 4...) aqtqaqactc tqtotbaaaa baaaacaaaa baaacaaaca aaaaaaccgg aaaccaabaa 4 - 0 aabtttttga ggaabaaagg gaabbaggta ttttattaat totoatabbt obagagtgtt aggoacadaa taaabattoa abbaagabbt gttgbabtga gbagttoata tataabagga  $\Xi_{i}: \frac{1}{2} \leq_{i}$ gtigacccaag tigaaacgta gaatcagcoo totoatacca cittitigoca ggigatcata. •5 ggoaagttad ttagoatota tgtttdotta ttattaaaaat ggtdataatt abaatgoota agataagggg gttgbtgtga agattattaa atbbtbagta aabtttggbt attgttabtb ctatgattat datcaatato atcaattaco ttatotgtto aatactggtg goacaggtoo accagotaga tytotaatoo ottatytyto tattaytyyt acaagtygag ittyayigyy 31. atttittit titttitaa gassagtiss aaatsatsaa ggatgatase astagtagsa gettgtettg tetgtaeagt ggtaagtest ggeettgeet tigiggeaaa tacaasooss 100 1 ... tigaatiget tygesettet eageatiges taatattagg gaggaetest ytaaayetea 10 orggitagaa garbaagada origggoorg gitorgoood igggggooat igggtaario cetssadiot boaqqobtoa ottqobotot gaabaagaaa gaggootgit otggtoatoo ctocaquotg tocagoootg qoabtotqtg agtoggttta ggcagoagoo boggaabaga 1... tgaggoaggo agggttggga ogtttggtoa ggabagooca bogcaaaaag aggaggaaag aaatgaaaga cagagacago titggotatg ggagaaggag gaggoogggg gaaggaggag 136 acaggaggag gagggassas ggggtggagg ggagatagac scagoocaja gototjagtj gtttootgtt gootgtotot aaacoootoo acattoocgo ggtoottoag actgcoogga 1440 gadododěte ždesžápodo otgostýcht gobactgaýg žatytytgae odcojockaj 1500 1550 botttodott ofatagitigo accaacoccy acabeceegt teacgeogte agetegigig caagggaggg aagetotget gaggatgege eteteeteee ggeteealea eggetbeeet 160.0 taagagbatg godotoggto ötgtotgoot gttgottito agaaggtgga otoactgtgt 1690 1740 aactttgtot tooottacag gittacagga aaataatoto actatgiist togggggags 1800 attitologo tototatiti tototatato tatotototago ticogadadot gootasotat 1800 optotttgot copttigoaa atgtggcago stoptopttt potgggaato tgatopeato 1020 acagetgeca cagggaeetg gecageaaee ggagtetgte etesagatet eggteagggg

1980

ttotgtttto caaaaaggga otttgcagaa caatcagttg atctotgaaa gggaaagggg

gaggottoac cattaatooa cacctotggg aagottotgt titoototaa itotootoac

todomandas pasottoogt poodosanta pasanntito agonocatto tgootgannt gronocaton panostongt ottgggttng gtgttgttoo tgtootgagt toottgggnt gronocang ggongtagos ottngtttnat stagntotga nanocangno ntonggannts gronocang nontgggtgt natgggnggt ggngtgtgst gggggngntn ttotonganng griginnggg ggnngggnng naggnngnna tto	2100 2160 2220 2260 2313
<pre>KL10N 2 KL11</pre>	
altalided gottgtottg totgtacagt ggtaagtoot ggoottgoot ttgtgggaaa tidalcocco ttgaattgot tggcotcot bagcattgoo taatattagg gaggactoot gtaalgotca biggtagaa gatcaagaca bitgggootg gttotgooc tgggggooat biggtaatto bitgcagtot boaggootca bitgggootg gttotgooc tgggggooat biggtogtoo boocaggoot gtocagoot ggoactotot gaacaagaaa gaggotgtto bitggtooc boocaggoot gtocagoot ggoactotot gaacaagaaa gaggoogaaa gidaligagaa agacaggaa agaggagattg gaacgtttgg toaggacago boacogcaaa aada igagga aagaaatgaa agacagagab aggggagaaa gaggaagab ggggaaagag gaggaagaga gaggaagaga gidaligaga gaggaagaga gaggaagab agagototga gidaligoog boocagoog boocagoog boocagoog gaggaagaga gaggagagaga gaggagaaga gaggaagaga gaggaagagagagagagaaga	60 100 140 240 340 440 440 5
KM10 3 KM11 - 22 M12 DNA KM13 Artificial Sequence	
1120 1123 Primer	
- 1400 - 3 Abbautagea gettgtettg to	2
HR10:-4 HR11:-21 HR12:-DNA HR13:-Artificial Sequence	
:::20:- :::23:- Primer	
-:400:- 4 hitologoot giologici i	1.1
00100-5 02110 21 -00120-DNA 00130-Artificial Sequence	
01200- 01231 Primer	
(400): 5 Ragadagaga caggggagaa g	2.1

KL10: 6 K211: 22 K212: DNA

~ L L 3 ?	Hitilidial Sequence	
<221		
R223	Brimer	
<411		5.5
tacct	cagtg gcaggcaggc ag	22
<210:		
7220	• •	
<211. <212:		
<213	Artificial Sequence	
412.301		
-12.331	Primer	
. <b>4</b> 00:		
	aggca ggcggcag	18
- वपुषु		
.210:	ê	
12:11	21	
+12121	DNA	
- 2.3	Artificial Sequence	
12:10:		
504	Primer	
6		
-:4:00:	6	
rege::	atata agggaagtat g	21
0.4.0.		
-12101		
::211:- ::212:		
	Artificial Sequence	
	M.C. HOIAT Bogashos	
-:2200-		
12230	Primer	
14000		19
LUCat	cacco tgttgctgt	10
-:210:-	10	
-::::11:	18	
-22122	DNA	
-(213)	Artificial Sequence	
a na vinata s		
-:220h	Primer	
'strabels'	FILMEL	
.4001-	10	
mada	ggaga ttataatt	18
(3.10)	11	
3012		
(212)	DNA Artificial Sequence	
er rai	HILLIOIDI DEGLENOC	
:220:-		
<2231	Primer	
<400>		19
accac	adtoc atdocatca	1 3

<2110 12 <111 > 19 <212 > DNA <013 > Artificial Sequence <211 > <123 > Brimer <400 > 12

<400> 12 tababbadab tgttqutgt 19

-4-